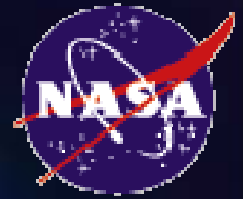


NASA Wallops Flight Facility

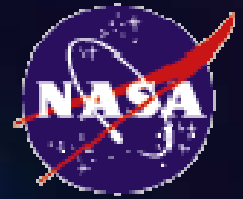
Range Safety Orientation Briefing

SAFETY FIRST!



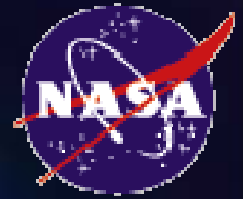
Telephone Numbers

- Emergency – 911
- Non-Emergency – 1300
- Island Fire Department (non-emergency) - 2600
- Health Unit – 1266
- Safety Office – 2518 / 1498
- Range Safety Office – 1174 / 1588 (Control Center)
- Security Office – 2536
- Main Base Paging – 55 (Wait 2-3 seconds before speaking)
- Island Paging – 56 (Wait 2-3 seconds before speaking)



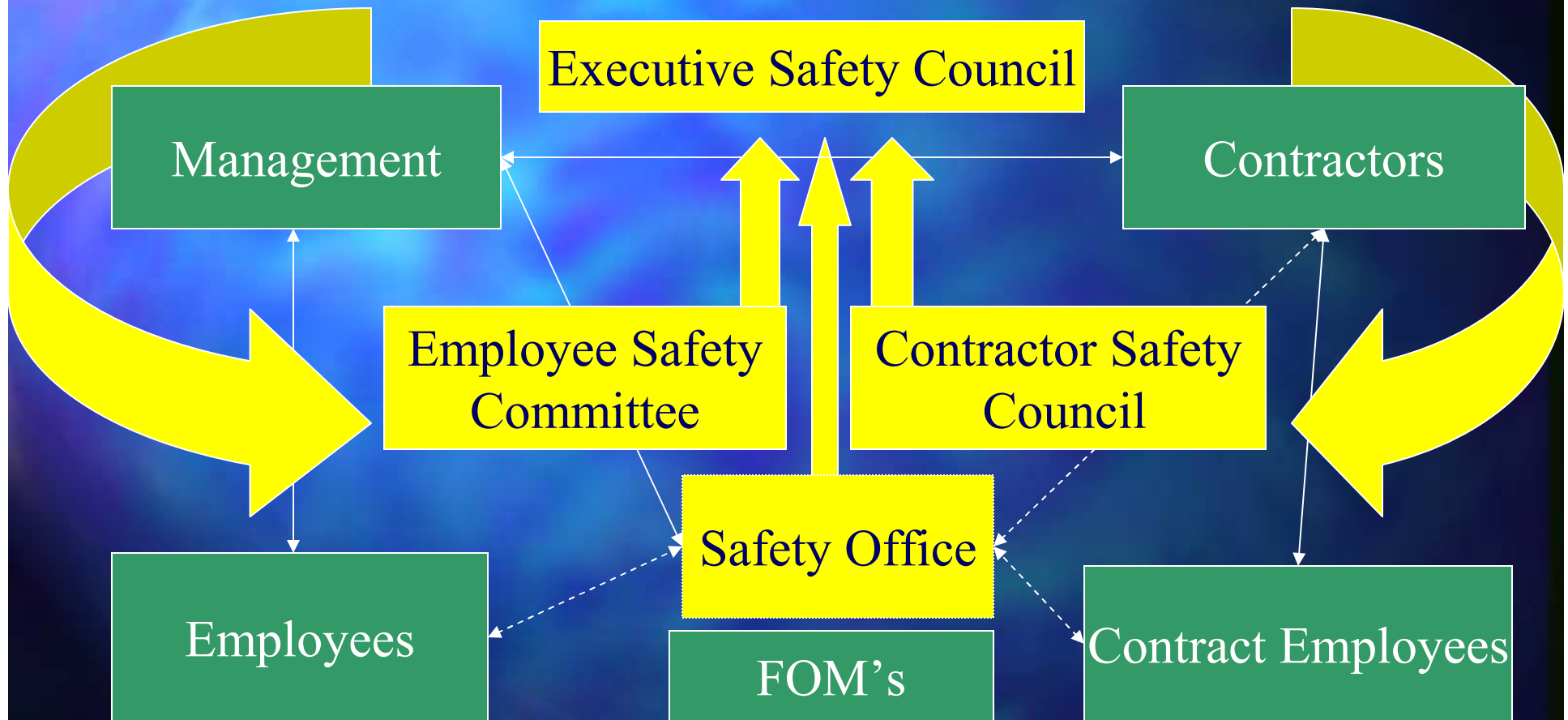
Emergency Services

- On Base – 911
- Cell Phone 757-824-1333
- 24 hour Services
 - Emergency Medical Services
 - Fire
 - Rescue
 - Security



Safety Structure

Occupational Safety and Health

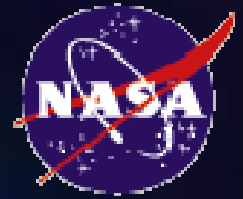


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Wallops Flight Facility Safety Office

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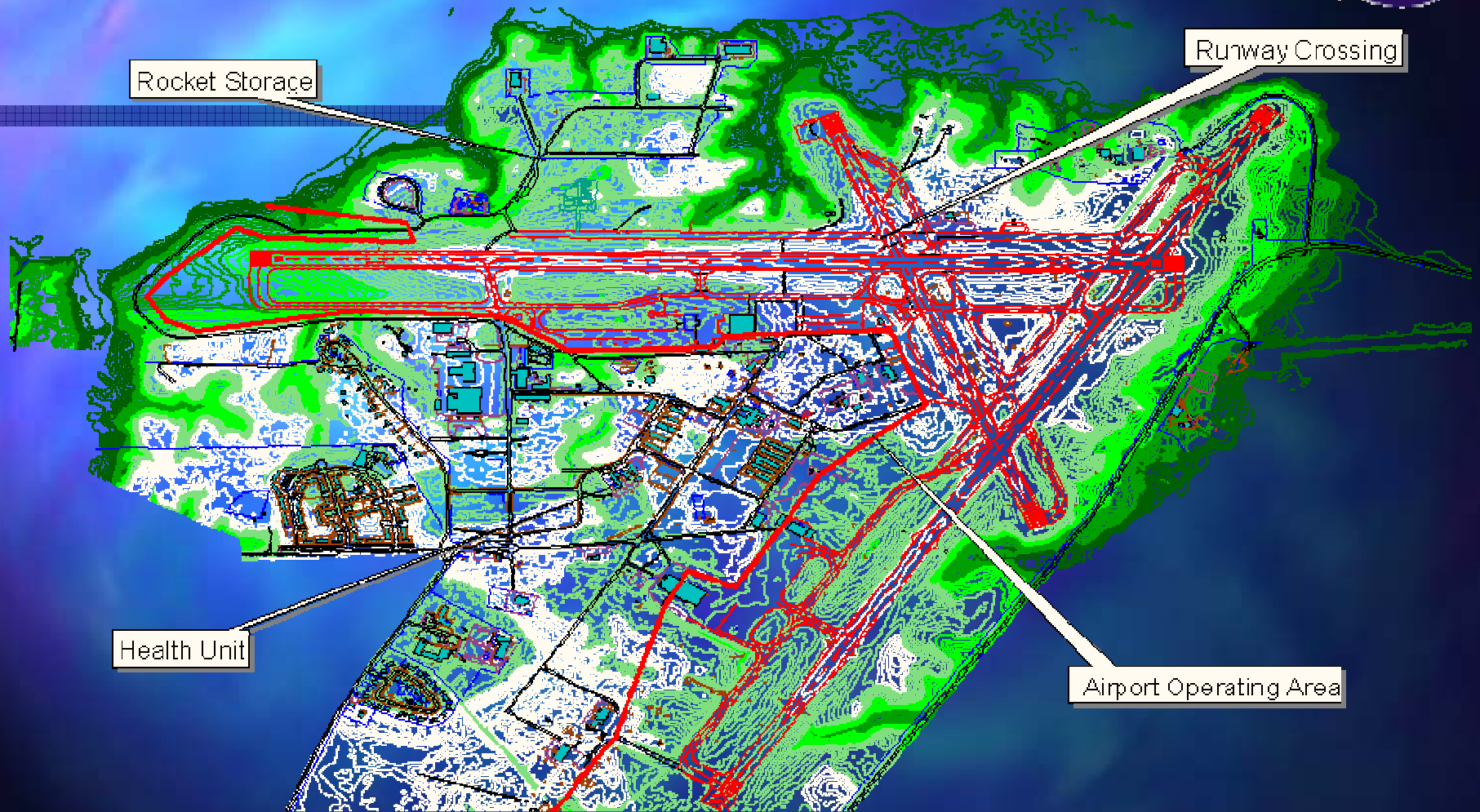
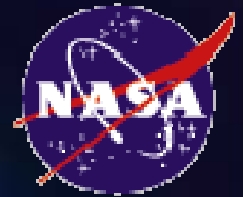
<http://www.wff.nasa.gov/~code803/>



Occupational Safety

- Know the Hazards of your job
And how to protect yourself
 - Hazard Communication
 - Job Hazard Analysis
 - Supervisory directions
- Special Consideration
 - Lockout/Tagout
 - Fall Protection
 - Confined Space

Mainbase

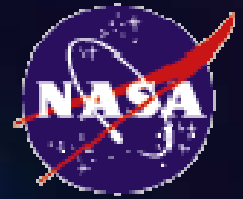


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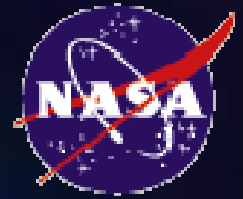
<http://www.wff.nasa.gov/~code803/>



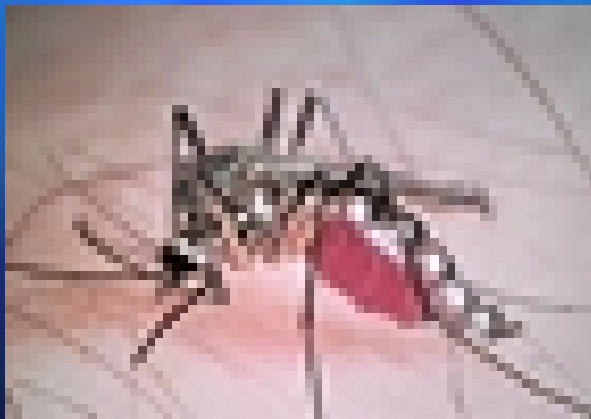
WFF Health Unit



- Located on the South end of building F-160
- Physician and RN present during normal duty hours



Insect Hazards

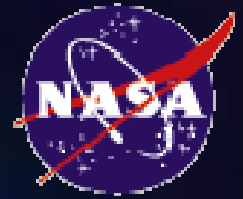


■ Lyme Disease

- <http://www.cdc.gov/ncidod/dvbid/lyme/index.htm>

■ West Nile Virus

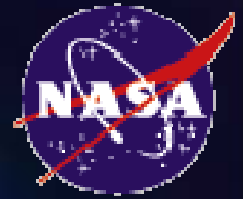
- <http://www.cdc.gov/ncidod/dvbid/westnile/index.htm>



Construction Sites

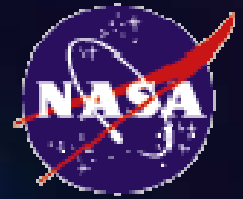


- We have numerous construction projects
- Access must be coordinated with the Construction Inspector
- For Your Safety, Please stay out



Recreation

- Gym & Fitness Center
 - Buddy System
- Jogging
 - Stay off the Airport



Traffic Safety & Security

- Speed Limit 35 MPH unless otherwise posted... (Parking Lots 15 MPH)
- Pedestrians have the right-of-way, but...
- Wear your Badges
- Vehicles are subject to Search
- The Security Force is Armed and has Arrest Authority

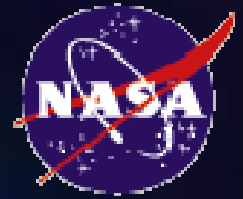
Unique Hazards

Airfield

Radars

Explosives

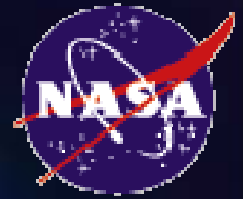
Launch Pads



Active Airfield

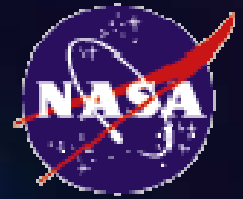


- For Your Safety, Please stay off the airfield, Access requires Contact with the Control Tower (FM2 or 1688)
- Note the Double Yellow Line



Airfield Safety

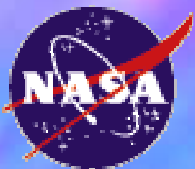
- Never drive near an operating Aircraft
- You must have clearance from the Control Tower to enter the airfield
- Blinking Runway lights indicates that the Control Tower is trying to get your attention!
- Pay close attention to the Runway Crossing lights
- No Jogging on the Airfield



Active Airfield

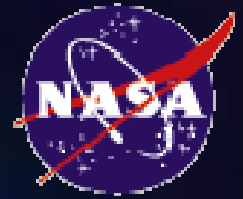


- Access requires Contact with the Control Tower (FM2 or 1688)



Airfield Warning Lights And Signs

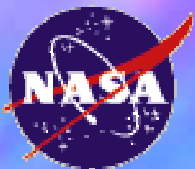
WHAT MEANING	WHERE	
<p>FLASHING</p>  <p>RED LIGHT</p>	Runway Crossing 17-35	STOP. Make sure runway is clear. Proceed.
<p>STEADY</p>  <p>RED LIGHT</p>	Runway Crossing 17-35	STOP. Hold position until this light converts to a flashing red (indicating all clear).
<p>NO</p>  <p>LIGHTS</p>	Runway Crossing 17-35	DO NOT PROCEED. Call extension 1688 and report that there are no lights.
	Entrances to Airfield	DO NOT Enter the Airfield without contacting the Control Tower



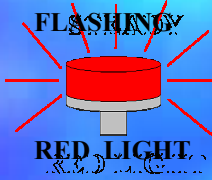
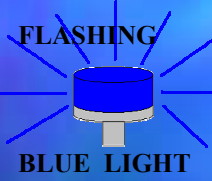
RADARS

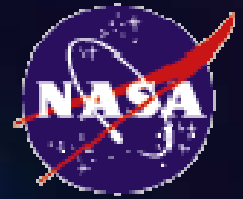


- Multiple Radars to support the mission
- Two main hazards
 - Struck by the Antenna
 - Radio Frequency energy
- Controls established



RADAR Warning Lights

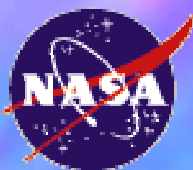
WHAT MEANING	WHERE	
 <p>FLASHING RED LIGHT</p>	Radar Facilitie S	Power has been applied to the radar and the antenna may move
 <p>FLASHING BLUE LIGHT</p>	Radar Facilitie S	Radar is radiating and a personnel hazard from RF radiation is present






Explosives

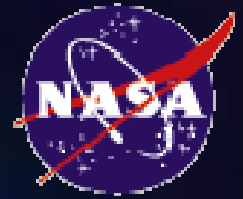


- Handling Explosives requires Certification
- RF and Static Sensitive
- Stored in restricted locations



Explosive Warning Signs

WHAT MEANING	WHERE	
	Magazine s, Rocket Motor Buildup, etc.	1.1 Explosives - The principal hazard is blast and items may be expected to mass detonate when a small portion is initiated by any means.
	Magazine s, Rocket Motor Buildup, etc.	Evacuate at least 4000 feet in the event of a fire. 1.3 Explosives - The principal hazard is mass fire. These items burn vigorously and are difficult to extinguish.
	Magazine s primarily	Minimum withdrawal distance is 600 feet. 1.4 Explosives - The principal hazard is moderate fire. These items pose a fire hazard but no blast hazard. Minimum withdrawal distance is 300 feet.



Launch Pad Safety

- Definitions
- Roles and Responsibilities
- Operational Controls
- Access Badges
- Warning Lights and Roadblocks

DEFINITIONS



Category A

A term applied to a system which: 1) initiation of the system could result in personnel injury or death and/or substantial damage to property; 2) there is sufficient potential energy to initiate the system; and 3) the energy output of the system cannot be restrained

Category B

A term applied to a system which: 1) is highly improbable of being initiated, or 2) shall not cause personnel injury or substantial property damage, if initiated

Category A/B

A term applied to a system which changes from a Category B state to a Category A state during the various stages of processing

Flight Safety

A philosophy and methodology whereby rocket, balloon, drone, UAV, and aircraft flight operations can be performed in a reasonable and prudent manner without undue risk to people or property or embarrassment to NASA or the United States Government

Ground Safety

ous Operations

Those safety considerations, procedures, and resulting restrictions associated with hazardous systems during storage, handling, pre-launch, launch, and

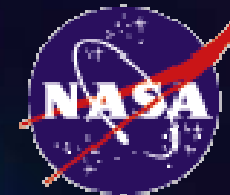
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<http://www.wff.nasa.gov/~code803/>

ROLES AND RESPONSIBILITIES



TEST DIRECTOR (TD): Authority over all operations conducted at WFF

RANGE OPERATIONS ASSISTANT (ROA): Assists the TD in monitoring countdown operations and range status

PROJECT MANAGER (PM): Primary point of contact between the range and program personnel (for range assets)

LAUNCH PAD SUPERVISOR (LPS): Manages activities on the launch pad

SAFETY OFFICE CHIEF: Has supervisory authority over all Safety Office employees

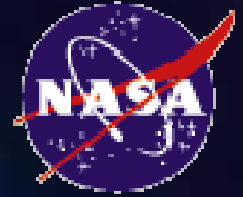
WFF RANGE SAFETY OFFICER (RSO) : Assures the implementation of the WFF Ground Safety and Flight Safety Programs

MISSION RSO: Directs the activities of the Safety Team during a specific mission

OPERATIONS SAFETY SUPERVISOR (OSS):

- Implements the Ground Safety Plan for a hazardous operation
- Must be informed prior to the conduct of a hazardous operation & must be present until the operation is completed
- Has authority to stop operations if he/she determines that an unsafe condition may exist
- Must be informed as to the roles and responsibilities of the personnel conducting the hazardous operation
- Exercises initial onsite control over a mishap & assists the RSO in the implementation of contingency procedures

OPERATIONAL CONTROLS



➤ DOCUMENTATION

- GROUND SAFETY PLAN (GSP) – DOCUMENTS THE CONTROLS IMPOSED ON PERSONNEL DURING HAZARDOUS OPERATIONS
- RISK ANALYSIS REPORT (RAR) – DOCUMENTS THE LEVEL OF RISK POSED BY ALL HAZARDOUS SYSTEMS

➤ HAZARDOUS OPERATIONS

- REQUIRE THE PRESENCE OF AN OSS

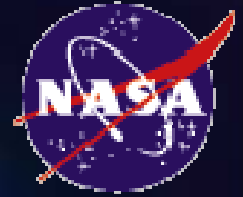
➤ OPERATIONAL PROCEDURES

- ALL POTENTIALLY HAZARDOUS OPERATIONS MUST BE DOCUMENTED IN A PROCEDURE
- ALL HAZARDOUS PROCEDURES MUST BE APPROVED BY THE SAFETY OFFICE

➤ TRAINING

- RANGE USERS MUST PROVIDE DOCUMENTATION TO THE GROUND SAFETY GROUP INDICATING THE TRAINING, EXPERIENCE, AND CERTIFICATION OF PERSONNEL TO PERFORM HAZARDOUS OPERATIONS

OPERATIONAL CONTROLS (CONTINUED)



➤ PERSONNEL LIMITS

- ALL HAZARDOUS OPERATIONS WILL BE CONDUCTED WITH THE MINIMUM NUMBER (2) OF ESSENTIAL PERSONNEL

➤ EQUIPMENT USED IN HAZARDOUS OPERATIONS

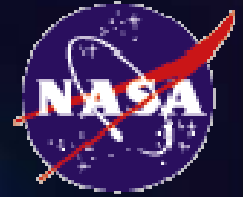
- ALL LIFTING DEVICES AND INSTRUMENTS USED FOR TAKING MEASUREMENTS IN ORDNANCE SYSTEMS SHALL HAVE A CURRENT CALIBRATION STICKER (< 1 YEAR)
- INSTRUMENTS USED FOR TAKING MEASUREMENTS IN ORDNANCE SYSTEMS SHALL BE TESTED PRIOR TO USE

➤ PERSONAL PROTECTION EQUIPMENT (PPE)

- WRIST STRAPS MUST BE WORN ANY TIME PERSONNEL ARE HANDLING ORDNANCE, ORDNANCE CIRCUITS, OR OPEN PROPELLANT GRAIN
- STATIC DISSIPATIVE LABCOATS MUST BE WORN IN AN AREA WHERE ORDNANCE IS PRESENT
- WEAR THE PROPER PROTECTIVE EQUIPMENT FOR THE JOB - HARDHATS, SAFETY GOGGLES, SPLASH APRONS, GLOVES, ETC.



WALLOPS ISLAND ACCESS DESIGNATION (WIAD) BADGES

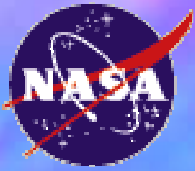


NON-HAZ: Allows wearer access to areas of non-hazardous (Category B) operations only

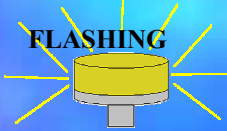
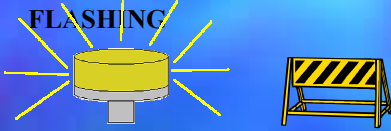

SPEC-HAZ: Allows wearer access to areas of hazardous (Category A) operations but only for specific missions

ALL-HAZ: Allows wearer access to areas of hazardous (Category A) operations

WI-NONE: Issued to Navy for access to non-hazardous facilities located on the Island



Operations Warning Lights and Roadblocks

WHAT MEANING	WHERE	
 FLASHING AMBER LIGHT	Launch Pods	Caution Time - Only personnel with OSS permission are permitted access to the pad
 FLASHING AMBER LIGHT	Launch Pods	Danger Time I - Only active/essential personnel performing specific tasks are permitted to pass the roadblocks with OSS permission
 FLASHING RED LIGHT	Launch Pods	Danger Time II - NO personnel are allowed to pass the roadblocks

Do not proceed through any roadblocks without OSS permission. Access can be granted by calling Test Director (1094 / 2224 (Control Center)).

WFF WORK HOURS POLICY



➤ GENERAL WORK HOURS

- 16 HOURS PER WORK PERIOD
- 72 HOURS PER SEVEN DAY PERIOD OR 13 CONSECUTIVE DAYS
- 8 HOURS MINIMUM OFF DUTY BETWEEN WORK PERIODS OR 10 HOURS MINIMUM OFF DUTY WHEN WORK PERIOD IS GREATER THAN OR EQUAL TO 12 HOURS.

➤ SAFETY CRITICAL WORK HOURS

- 12 HOURS PER WORK PERIOD
- MINIMUM 10 HOURS OFF WHEN WORK PERIOD EXCEEDS 10 HOURS
- MAXIMUM OF 2 CONSECUTIVE 12 HOUR WORK PERIODS WITHOUT MINIMUM 12 HOURS OFF
- MAXIMUM 7 CONSECUTIVE 10 HOUR PERIODS IS PERMITTED WITHOUT 24 HOURS OFF
- MAXIMUM 13 CONSECUTIVE 8 HOUR DAYS
- FLIGHT SAFETY OFFICERS HAVE MORE STRINGENT REQUIREMENTS

➤ WAIVER AUTHORITY

- GENERAL: WFF DIRECTOR CODE 800
- SAFETY CRITICAL: CHIEF OF THE SAFETY OFFICE CODE 803